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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,102	07/31/2001	Howard Fein	HOFE / 02	2446

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EXAMINER	
FERNANDEZ, SUSAN EMILY	
ART UNIT	PAPER NUMBER
1651	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/919,102	FEIN, HOWARD	
	Examiner	Art Unit	
	Susan E. Fernandez	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,24,31,38,64 and 65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,24,31,38,64 and 65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed May 30, 2007, has been received and entered. The declarations under 37 CFR 1.132 filed January 25, 2007 and May 30, 2007, have been received and entered.

Claims 3-23, 25-30, 32-37, and 39-63 are canceled. Claims 64 and 65 are new.

Claims 1, 2, 24, 31, 38, 64, and 65 are pending and examined on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 64 and 65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, new claim 64 comprises new matter. The specification does not provide support for the recitation that the formulation is administered "six applications for about three minutes each" or "1-10 applications a day." Though it is noted that there is teaching in the specification of one application a day and two applications a day, the entire range of "1-10 applications a day" is not disclosed. Because the specification as filed fails to provide clear support for the new claim language, a new matter rejection is clearly proper.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 24, 31, 38, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the disclosure of SU 1685448 in view of Zaias (U.S. 5,411,741), Rawlings et al. (U.S. 5,665,366), and Burbach (Dermatologica 118: 379-391 (1959)).

SU 1685448 discloses treating seborrheic keratopapilomata (skin condition seborrheic keratosis) with a composition comprising trypsin as well as theophylline and dimexidum (dimethylsulfoxide – DMSO) (last paragraph, page 1 of English Translation of SU `448). Topical application of the disclosed composition of trypsin, theophylline, and DMSO to seborrheic keratopapilloma resulted in "a regression of swelling," which, following weeks of treatment, eventually led to the disappearance of the swelling (last paragraph, page 3 through first paragraph, page 4 of English Translation of SU `448). Thus, the reference clearly taught the treatment of seborrheic keratosis by topical application of a composition **containing** the hydrolase trypsin, at a concentration selective for regulating depth of skin treatment, as well as regulating removal of the swelled layer. As there is removal of the swelled layer, there is removal of seborrheic keratosis.

SU `448 does not expressly disclose the concentration of trypsin recited in instant claims 1, 24, and 64. However, the selection of a specific suitable concentration, including that

claimed, clearly would have been an obvious matter of optimization on the part of the artisan of ordinary skill in the art, as it depends on the amount of base used in the SU `448 composition (see last paragraph, page 3 of English Translation). Furthermore, though SU `448 does not disclose the administration regimen recited in the last four lines of instant claim 64, in the therapeutic arts, it is obvious to optimize the effective dosage of a drug wherein one is increasing the dosage and/or duration in order to elicit an improved result.

SU `448 also differs from the claimed invention in that SU `448 does not recite the application of a composition *consisting essentially* of trypsin.

Zaias, which discusses conventional carriers for skin treating compositions delivered to the epidermis (specifically depigmentation agents), teaches against the inclusion of DMSO as a carrier for compositions for treating the skin. At col. 3, lines 5-10, the Zaias patent states that DMSO causes extreme skin irritation, redness, itching and scaling. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the method of treating seborrheic keratosis disclosed by SU1685448 by administering a composition containing trypsin but eliminating the DMSO. One of ordinary skill in the art would have been motivated to remove the DMSO since it is known to cause skin irritation. One of ordinary skill in the art would also still have a reasonable expectation of success by using only the trypsin as the active ingredient because of the disclosure of the other secondary references. Clearly, the artisan of ordinary skill in the art would have recognized that DMSO serves as a carrier of the SU `448 composition.

Additionally, Rawlings et al. teaches that the stratum corneum trypsin-like enzyme (SCTE) may be administered alone or in combination with suitable additional proteases such as

trypsin to the skin in a vehicle. At col. 12, a composition of SCTE in ethanol, perfume, BHT and water is disclosed. No lanolin, theophylline or sunflower oil is necessary, yet this composition is disclosed as appropriate for the topical treatment of the skin for the disclosed purposes. Rawlings et al. discloses multiple formulations in multiple forms, all suitable for the administration of the SCTE and, if desired, trypsin to the skin for the treatment of conditions of the skin where the condition is characterized by hyperkeratinisation. At col. 9, lines 49-51, the amount of the composition and frequency of its application depends on the condition of the patient. It is noted that Rawlings et al. teaches dimethyl sulphoxide (DMSO) as an optional alternative solvent and not a required component of the enzyme composition. See col. 3, lines 23-28.

Also, the disclosure of Burbach indicates the effect on human skin of proteases, and specifically trypsin, in varying amounts. The conclusion was that trypsin solutions, dependent upon concentration and period of application, were capable of breaking up the connection between the epidermis and the corium (dermis). The reference indicates at page 383 that crystalline trypsin would effect complete detachment of the epidermis after 1-2 hours after injection and disintegration of the epidermis after 3-4 hours after injection

Therefore, the selectivity of trypsin for the epidermal layer as a substrate was well known and the result of topical or injected application of trypsin to the epidermis was known and expected. Therefore the use of a composition consisting essentially of trypsin would have been obvious to one of ordinary skill in the art at the time the invention was made in order to effect a regulated removal of specific areas of the epidermis afflicted by seborrheic keratosis. Thus, a holding of obviousness is clearly required.

Response to Arguments

Applicant's arguments and declarations under 37 CFR 1.132 filed on January 25, 2007 and May 30, 2007, have been fully considered but they are not persuasive. The applicant asserts that there is no teaching in Zaias of using enzymes in a composition where it is desirable to eliminate DMSO. As pointed out above and in the previous office action, Zaias is provided to demonstrate how detrimental DMSO is on the skin. As the SU '448 teaches the treatment of a skin disease, given the teachings of Zaias, the person of ordinary skill in the art would have been motivated to eliminate DMSO from the SU '448 treatment, regardless of the fact that Zaias does not teach administration of an enzyme to the skin. Though Zaias does not teach that DMSO affects enzyme activity, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

It is also respectfully noted that Rawlings et al. is provided to show a trypsin-containing composition applied to the skin which does not comprise DMSO, thus demonstrating that DMSO is not required for the activity of trypsin on skin.

Though Burbach teaches different concentrations of trypsin other than those recited, and though Burbach does not teach the treatment/removal of seborrheic keratosis, it is noted that Burbach is provided to show that the administration of a composition consisting essentially of trypsin to skin had previously been taught. Thus, there is no reason to conclude that the presence

of DMSO is necessary for the administration of trypsin to skin in the teaching in SU '448 of treating seborrheic keratosis.

With respect to the arguments of the filed declaration, it is noted that it is through routine optimization of the trypsin treatment taught in SU '448 that the recited regimen would have been rendered obvious.

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan E. Fernandez whose telephone number is (571) 272-3444. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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